RESTRICTED CIRCULATION

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Agricultural Memorandum 605A
Rate of change of earth temperature with height

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Ag Mem 605, examined 1 ft earth temperature data for 6 stations in NW England. Publication Met O 794 provides 1931-60 averages from which those for Bwlchgwyn (386m), Wrexham (84m) and Hawarden (5m) were analysed in a similar mannor. A check on the NW results was also carried out by using the long-term averages for Keswick (77m), Kielder Castle (201m), Spadeadam (274m) and Moor House (556m). The averages for Malham Tarn were obviously incompatible. The results for change with height (°C/100m) were:

Month	Ag Mem 605	NW England	N Wales	Suggested Mean
Jan	0.28	0.41	0.26	0.30
Feb	0.31	0.42	0.31	0.35
Mar	0.52	0.52	0.47	0.5
Apr	0.76	0.75	0.65	0.7
May	0.79	0.82	0.77	0.8
June	0.94	0.88	0.86	0.85
July	0.90	0.83	0.86	0.85
Aug	0.83	0.78	0.82	0.8
Sept	0.63	0.77	0.69	0.7
Oct	0.66	0.69	0.51	0.6
Nov	0.49	0.61	0.44	0.5
Dec	0.32	0.45	0.33	0.4

The average of the suggested mean figures is 0.6°C/100m which is identical with the standard height correction for air temperatures.

Any comments of suggestions on this paper should be referred to the author.

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